



# Makrolon® GP Prismatic sheet

## Prismatic textured

Makrolon® GP Prismatic sheet is a translucent, UV stabilized, polycarbonate product with a prismatic texture on one side. This prismatic pattern has been optimized for light diffusion and light transmission, making it an excellent choice for most conventional lighting applications. The textured product features outstanding impact strength, high temperature resistance, superior dimensional stability, and is easy to fabricate. Makrolon GP Prismatic sheet is offered with a five (5) year Limited Product Warranty against breakage. The terms of the warranty are available upon request.

## Applications

Lighting lenses and covers

Typical Properties*			
Property	Test Method	Units	Values
<b>PHYSICAL</b>			
Specific Gravity	ASTM D 792	-	1.2
Refractive Index	ASTM D 542	-	1.586
Light Transmission, Clear @ 0.118"	ASTM D 1003	%	86
Water Absorption, 24 hours	ASTM D 570	%	0.15
Poisson's Ratio	ASTM E 132	-	0.38
<b>MECHANICAL</b>			
Tensile Strength, Ultimate	ASTM D 638	psi	9,500
Tensile Strength, Yield	ASTM D 638	psi	9,000
Tensile Modulus	ASTM D 638	psi	340,000
Elongation	ASTM D 638	%	110
Flexural Strength	ASTM D 790	psi	13,500
Flexural Modulus	ASTM D 790	psi	345,000
Compressive Strength	ASTM D 695	psi	12,500
Compressive Modulus	ASTM D 695	psi	345,000
Izod Impact Strength, Notched @ 0.125"	ASTM D 256	ft·lbs/in	18
Izod Impact Strength, Unnotched @ 0.125"	ASTM D 256	ft·lbs/in	60 (no failure)
Instrumented Impact @ 0.125"	ASTM D 3763	ft·lbs	>46
Shear Strength, Ultimate	ASTM D 732	psi	10,000
Shear Strength, Yield	ASTM D 732	psi	6,000
Shear Modulus	ASTM D 732	psi	114,000
Rockwell Hardness	ASTM D 785	-	M70 / R118
<b>THERMAL</b>			
Coefficient of Thermal Expansion	ASTM D 696	in/in/°F	3.75 x 10 <sup>-5</sup>
Coefficient of Thermal Conductivity	ASTM C 177	BTU·in/hr·ft <sup>2</sup> ·°F	1.35
Heat Deflection Temperature @ 264 psi	ASTM D 648	°F	270
Heat Deflection Temperature @ 66 psi	ASTM D 648	°F	280
Brittleness Temperature	ASTM D 746	°F	-200
<b>ELECTRICAL</b>			
Dielectric Constant @ 10 Hz	ASTM D 150	-	2.96
Dielectric Constant @ 60 Hz	ASTM D 150	-	3.17
Volume Resistivity	ASTM D 257	Ohm·cm	8.2 x 10 <sup>16</sup>
Dissipation Factor @ 60 Hz	ASTM D 150	-	0.0009
Arc Resistance	-	-	-
Stainless Steel Strip electrode	ASTM D 495	Seconds	10
Tungsten Electrodes	ASTM D 495	Seconds	120
Dielectric Strength, in air @ 0.125"	ASTM D 149	V/mil	380
<b>FLAMMABILITY</b>			
Horizontal Burn, AEB	ASTM D 635	in	<1
Ignition Temperature, Self	ASTM D 1929	°F	1070
Ignition Temperature, Flash	ASTM D 1929	°F	870
Flame Class @ 0.060"	UL 94	-	HB

\*Some properties characterized using non-textured sheet.



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